

CUSTOMER NO. 25,255
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Docket: 2003DE410

Uwe Dahlmann, et al.

Serial No.: to be assigned

Filed: February 20, 2004

For: Corrosion And Gas Hydrate Inhibitors Having Improved Water Solubility And Increased Biodegradability

PRELIMINARY AMENDMENT

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Prior to the examination of the above-identified application, please amend the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

CERTIFICATION UNDER 37 CFR 1.10

Express Mail Label Number ER654097128US
Date of Mailing February 20, 2004

I hereby certify that on the date indicated above, this new U.S. patent application and the papers indicated as enclosed therein, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" addressed to: Commissioner for Patents, **Mail Stop Patent Application**, P.O. Box 1450, Alexandria, VA 22313-1450, in accordance with 37 CFR 1.10.



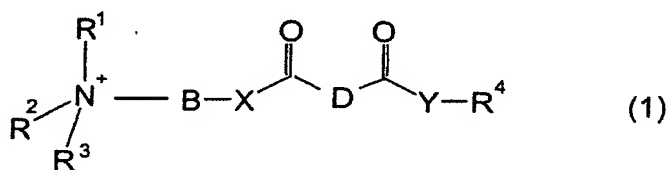
Signature of Person Mailing the Application

Vicki L. Sgro

Typed Name of Person Mailing the Application

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Currently Amended) A method for inhibiting corrosion and gas hydrate formation in mixtures of hydrocarbon and water, said method comprising adding to said mixture a compound ~~The use of compounds of~~ [[the]] formula (1)



where

R¹, R² are each independently C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl,

R³ is C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl, -CHR⁵-COO⁻ or -O⁻,

R⁴ is M, hydrogen or an organic radical ~~which optionally contains heteroatoms and has~~ having from 1 to 100 carbon atoms,

B is ~~an optionally substituted~~ a straight-chain or branched C₁- to C₁₀-alkylene group,

D is an ethylene group substituted by an organic radical having from 1 to 600 carbon atoms,

X, Y are each independently O or NR⁶,

R⁵, R⁶ are each independently hydrogen, C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl, and

M is a cation

~~as corrosion and gas hydrate inhibitors.~~

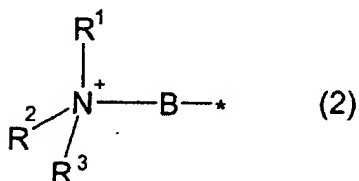
2.(Currently Amended) The ~~use as claimed in~~ method of claim 1, wherein B is a C₂- to C₄-alkylene group.

3.(Currently Amended) The ~~use as claimed in~~ method of claim 1 ~~and/or 2~~, wherein R¹ and R² are each independently an alkyl or alkenyl group of from 2 to 14 carbon atoms.

4.(Currently Amended) The method of claim 1 ~~use as claimed in one or more of claims 1 to 3~~, wherein R³ is an alkyl or alkenyl group having from 1 to 12 carbon atoms.

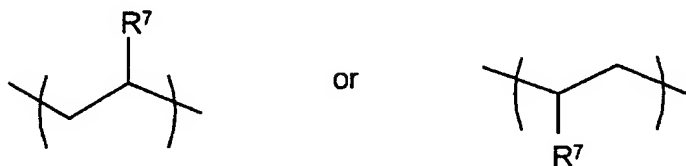
5.(Currently Amended) The method of claim 1 ~~use as claimed in one or more of claims 1 to 4~~, wherein R⁵ and R⁶ are hydrogen.

6.(Currently Amended) The method of claim 1 ~~use as claimed in one or more of claims 1 to 5~~, wherein R⁴ is a radical of the formula (2)



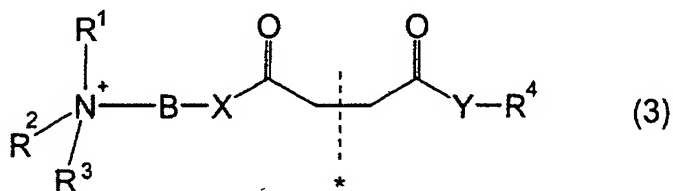
where R¹, R², R³ and B are each as defined in claim 1.

7.(Currently Amended) The method of claim 1 ~~use as claimed in one or more of claims 1 to 6~~, wherein D is a structural unit of the formula



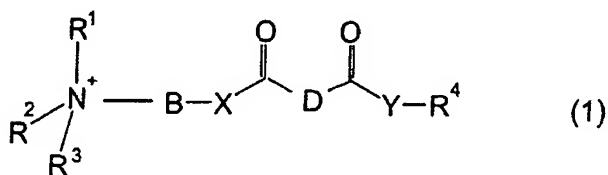
in which R^7 is C_2 - to C_{100} -alkyl or alkenyl radicals.

8.(Currently Amended) The method of claim 7 ~~use as claimed in one or more of claims 1 to 7~~, wherein R^7 is structural units of the formula (3)



where R^1 , R^2 , R^3 , R^4 , B, X and Y are each as defined in claim 1.

9.(Currently Amended) A compound of ~~[[the]]~~ formula (1)



where

R¹, R² are each independently C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl,

R³ is C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl, -CHR⁵-COO⁻ or -O⁻,

R⁴ is M, hydrogen or an organic radical ~~which optionally contains heteroatoms and has~~ having from 1 to 100 carbon atoms,

B is ~~an optionally substituted~~ a straight-chain or branched C₁- to C₁₀-alkylene group,

D is an ethylene group substituted by an organic radical having from 1 to 600 carbon atoms,

X, Y are each independently O or NR⁶,

R⁵, R⁶ are each independently hydrogen, C₁- to C₂₂-alkyl, C₂- to C₂₂-alkenyl, C₆- to C₃₀-aryl or C₇- to C₃₀-alkylaryl, and

M is a cation.

10.(New) The method of claim 1, wherein R⁴ contains hetero atoms.

11.(New) The compound of claim 9, wherein R⁴ contains hetero atoms.